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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/408,567	09/29/1999	SENTHIL SENGODAN	550.108US01	4175

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SQUIRE, SANDERS & DEMPSEY L.L.P.
14TH FLOOR
8000 TOWERS CRESCENT
TYSONS CORNER, VA 22182

EXAMINER

TRAN, TONGOC

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 07/14/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/408,567

Applicant(s)

SENGODAN ET AL.

Examiner

Tongoc Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-10,14-19,23-30 is/are rejected.
- 7) ☒ Claim(s) 2-4,11-13,20-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. This office action is in response to applicant's amendment filed on 4/30/2004.

Claims 28-30 are newly added. Claims 1-30 are pending.

Response to Arguments

2. Applicant's arguments filed on 4/30/2004 have been fully considered but they are not persuasive.

Applicant contends that Schulzrinne do not disclose or suggest "adding padding to mini-packets when the minipackets are encrypted to ensure each mini-packet is an integral multiple of a pre-determined block size" as recited in claims 1, 10 and 19 (Applicant's remark on page 11). Examiner likes to point out that since Schulzrinne teaches about voice communications and "...each conference participant sends audio data in small chunks of, say, 20 ms duration...". Therefore, it suggests that the data packet is sent in mini-packets (page 5, 2nd and 3rd paragraph). Schulzrinne further teaches that "padding may be needed by some encryption algorithm with fixed block sizes" (page 10, 3rd paragraph). Therefore, the limitation is met.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bharucha et al. (U.S. Patent No. 6229,821 hereinafter Bharucha) in view of Schulzrinne et al. (Network Working Group, "RTP: A Transport Protocol for Real-Time Applications", January 1996)

In respect to claims 1, 10 and 19, Bharucha discloses:

"a mini-packet protocol, comprising: assembling mini-packets into a payload wherein each mini-packet includes an associated mini-header for ensuring proper processing of each mini-packet (see Fig. 6, col. 3, line 65-col. 4, line 13);

"a disassembler for receiving a payload, the payload including a plurality of mini-packets, wherein the disassembler dismantles the payload into individual mini-packets" (see Fig. 6, col. 3, line 65-col. 4, line 13, col. 6, lines 11-30, disassembler is inherently required in order to receive the data); "a controller and signaling module, couple to the disassembler, for processing the individual mini-packets into a payload wherein each mini-packet includes an associated mini-header for ensuring proper processing of each mini-packet"; "and an assembler for combining mini-packets into a new payload for transmission via an output port" (see col. 3, line 65-col. 4, line 13, col. 6, lines 31-50) .

Bharucha does not disclose: "adding padding to mini-packets when the mini-packets are encrypted to insure each mini-packet is an integral multiple of a predetermined block size". However, Schulzrinne discloses adding padding to encrypted RTP in octets (integral multiple) (page 10, 3rd paragraph, page 46 section 9.1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Bharucha's mini-packet with adding padding to encrypted

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packet taught by Schulzinne in order to maximize interoperability of selective algorithm (DES) (page 47, 2nd paragraph).

4. Claims 5-9, 14-18 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bharucha (U.S. Patent No. 6,229,821) and Schulzrinne et al. (Network Working Group, "RTP: A Transport Protocol for Real-Time Applications", January 1996) as applied to claims 1, 10 and 19, and further in view of Ioannidis (swipe Internet Draft, "The swipe Security Protocol", December 3rd, 1993).

In respect to claims 5, 14 and 23, Bharucha and Schulzinne disclose the limitations as applies claim 1, 10 and 19. Bharucha and Schulzinne do not explicitly disclose adding an authenticator to each data packet. However, Ioannidis teaches adding authenticator to each data packet (see page 4, line 1). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement an authenticator to Bharucha's mini-packet to ensure the data is received by intended receiver.

In respect to claims 6, 15 and 24, Bharucha and Schulzinne in view of Ioannidis disclose the limitations as applies to claims 5, 15 and 24 above, Ioannidis further teaches:

"setting a length indicator in each mini-header for indicating a total length of the mini-packet including the authenticator " (see page 4, line 1, a packet header identifies the size of the packet and therefore the limitation is met) .

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In respect to claims 7, 16 and 25, Bharucha and Schulzinne in view of Ioannidis disclose the limitations as applies to claims 6, 15 and 24 above, Ioannidis further teaches:

“removing the authenticator based upon knowing a type of authentication used for generating the authenticator” (see page 4, line 1, the limitation is met because the intended receiver is inherently provided the key to remove the authentication).

In respect to claims 8-9, 17-18 and 26-27, Bharucha and Schulzinne in view of Ioannidis disclose the limitations as applies to claims 7, 16 and 25, Ioannidis further teaches:

The limitations of “the type of authentication comprises HMAC-SHA1 and the authenticator is 20 bytes”;

“the type of authentication comprises HMAC-MD5 and the authenticator is 16 bytes” are met by Ioannidis’ teaching of using authentication function such as the cryptographically strong one way authenticator such as MD5 (see page 6, 3rd paragraph), SHA1 is another type of one way hash function authenticator, therefore the limitation is met.

In respect to claims 28, 29 and 30, discloses the mini-packet protocol of claim 1, 10 and 19, wherein said adding step comprises adding and padding to the mini-packets, in which the padding varies from 1 (byte) to the predetermined block size (Schulzinne, page 10, 3rd paragraph, the limitation is met because depending of the length of the encrypted data, the number of padding octets (bytes) is added to fill the predetermined block sizes).

Allowable Subject Matter

5. Claims 2-4, 11-13, 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not teach the padding for each mini-packet is determined according to: $p = n - k * \text{floor}(n-1)/k$, wherein p is the amount of padding added to each mini-packet, n is the actual data size and k is the block size.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tongoc Tran whose telephone number is (703) 305-7690. The examiner can normally be reached on 8:30-5:00 M-F.

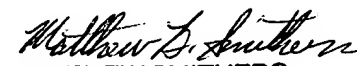
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A. Morse can be reached on (703) 308-4789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner: Tongoc Tran
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TT


June 29, 2004


MATTHEW SMITHERS
PRIMARY EXAMINER
Art Unit 2137